PETITION TO CEC LICENSE (As Amended) FOR THE OTAY MESA ENERGY CENTER-
Minor Modifications to Gas Pipeline Route 2C
99-AFC-5

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For Submittal to:

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Energy Facilities Siting and Environmental Protection Division
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May 2005

PETITION TO THE CEC LICENSE (AS AMENDED) FOR THE CALPINE OTAY MESA ENERGY CENTER PROJECT MINOR MODIFICATIONS TO GAS PIPELINE ROUTE 2C (99-AFC-5) MAY 2005

TABLE OF CONTENTS

TABLE OF CONTENTS

Section **Page**

TABLE OF CONTENTS

Section **Page**

List of Tables

List of Figures/Maps **Follows Page**

1.0 INTRODUCTION

1.1 OVERVIEW OF AMENDMENT

The California Energy Commission (CEC) approved the Otay Mesa Generating Project (OMGP) (99-AFC-5) on April 18, 2001. Subsequent to the CEC's approval of the project, Calpine Corporation (Calpine) purchased and now owns the project. The project is now known as the Otay Mesa Energy Center (OMEC) and is owned by a Calpine Corporation subsidiary, OMEC Limited Liability Corporation (OMEC LLC). Calpine/OMEC LLC has submitted several License Amendments to the CEC for the project, including CEC License Amendment 2 (July 2002), which addressed a proposed new gas pipeline route (Route 2C) between the plant site and gas supply interconnection points near the U.S./Mexico border. The previously proposed Route 2C was developed to avoid or minimize biological and engineering issues that were identified subsequent to the CEC License Decision for the project. This Petition proposes several minor modifications to the routing and construction of previously approved gas pipeline Route 2C.

This petition to modify the project contains information required pursuant to Section 1769 (Post Certification Amendments and Changes) of the CEC's Siting Regulations. The specific project changes and information needed to fulfill the requirements of Section 1769 are contained in Sections 1.0 through 7.0 of this Petition. The key project changes consist of a minor relocation of the northern portion of the gas pipeline route, use of trenching over the entire length of the pipeline route, deletion of several temporary work areas, narrowing of the pipeline construction right-of-way width in several areas, and increasing the pipeline diameter. The proposed changes also require an amendment to one CEC Condition of Certification for the project (refer to Section 4.0 of this Amendment for more information). A summary of the modifications is provided in Section 1.2.

1.2 OVERVIEW OF PROJECT CHANGES

The proposed changes to the OMEC project are requested by OMEC LLC in order to provide a feasible and environmentally preferable natural gas supply pipeline route for interconnection to gas supply interconnection points near the U.S./Mexico border. The modified gas pipeline component of the overall OMEC project is proposed to replace Route 2C which was approved by the CEC in 2002 based on CEC License Amendment 2 (submitted in July 2002).

In summary, the proposed modifications (refer to Maps 1-1 and 3.2-1) to the previously approved gas pipeline Route 2C consist of:

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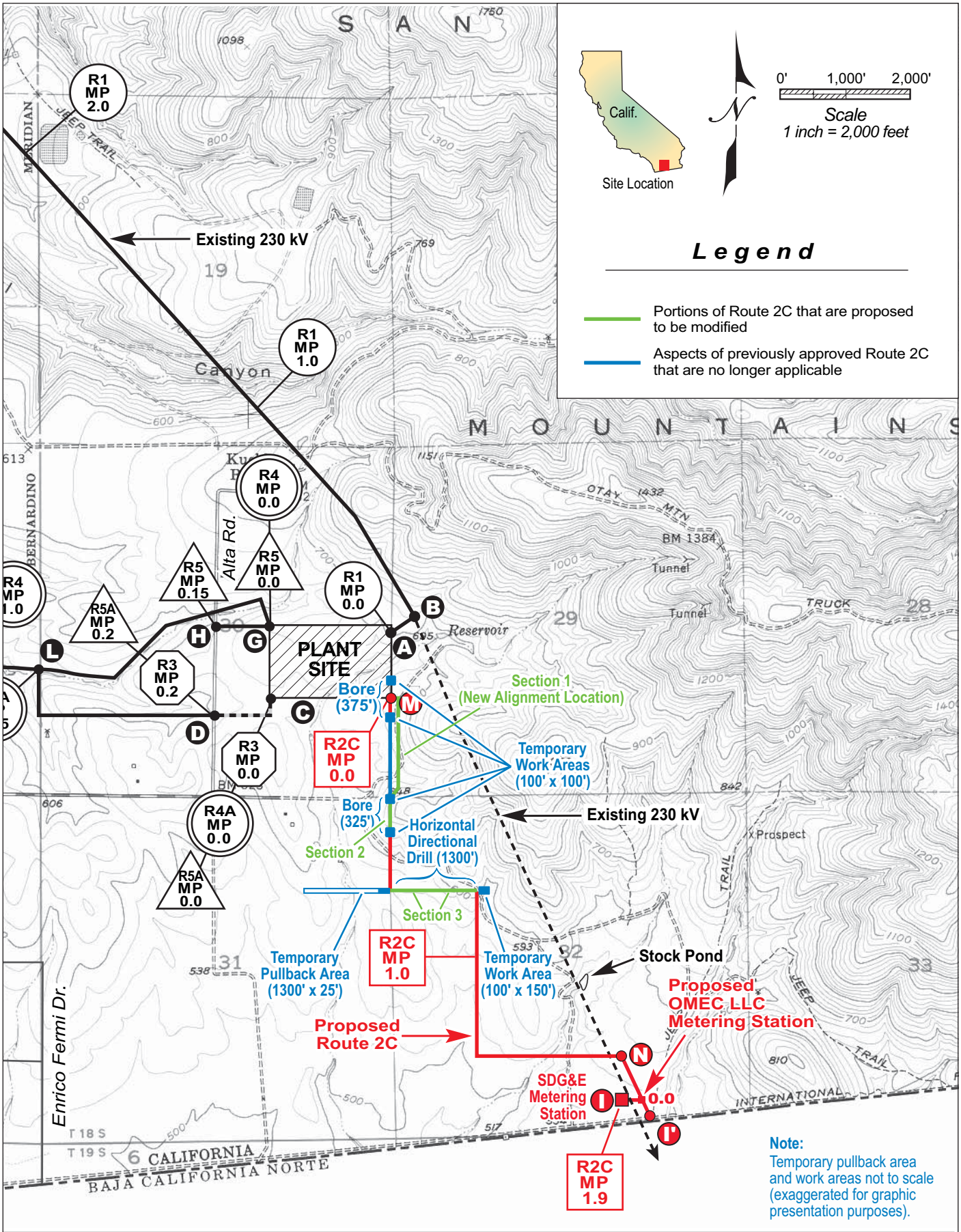
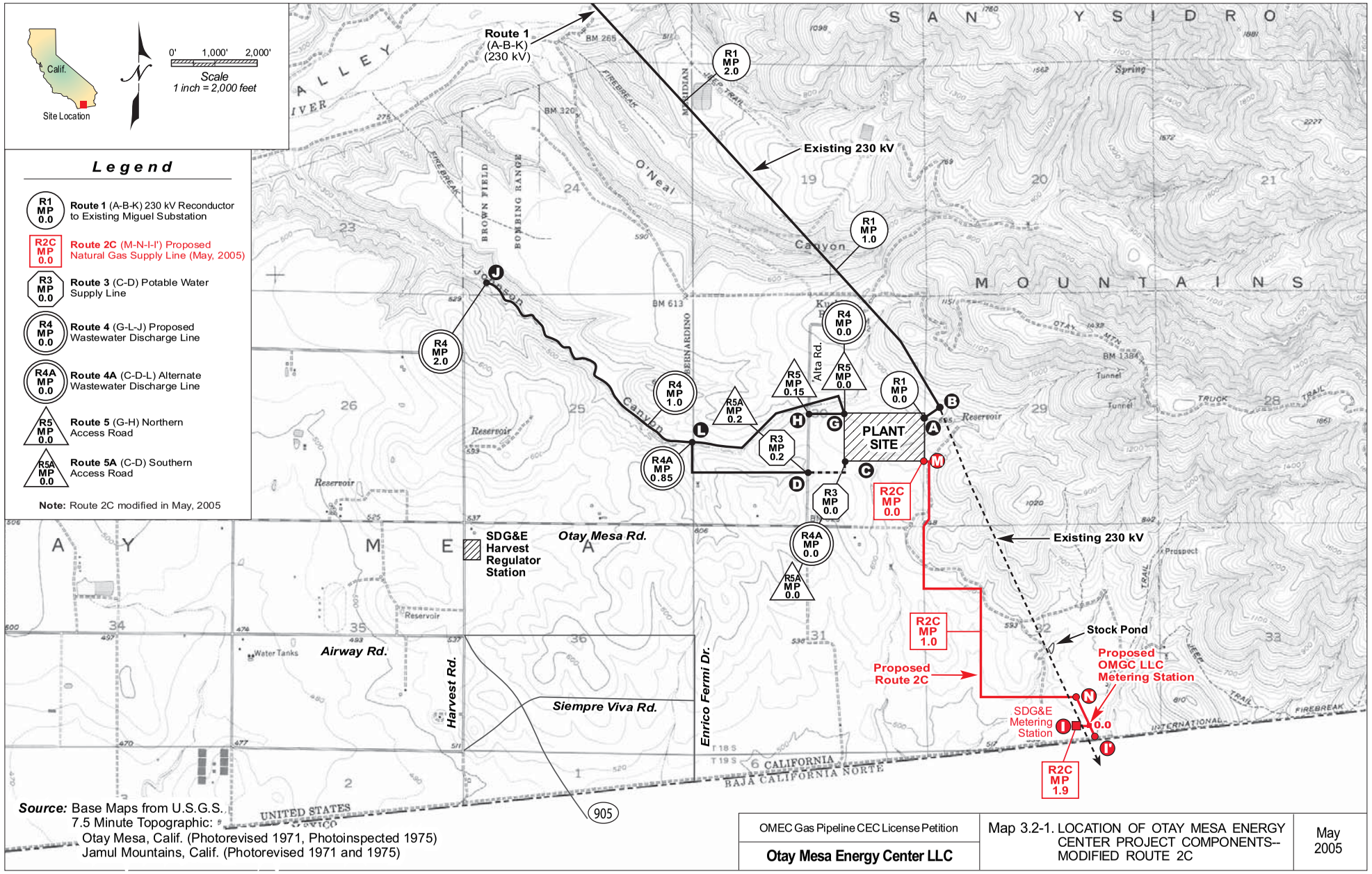


OMEC Gas Pipeline CEC License Petition **Otay Mesa Energy Center LLC**	Map 1-1. PROPOSED MODIFICATIONS TO GAS PIPELINE ROUTE 2C	May 2005



Source: Base Maps from U.S.G.S. 7.5 Minute Topographic:
Otay Mesa, Calif. (Photorevised 1971, Photoinspected 1975)
Jamul Mountains, Calif. (Photorevised 1971 and 1975)

OMEC Gas Pipeline CEC License Petition **Otay Mesa Energy Center LLC**	Map 3.2-1. LOCATION OF OTAY MESA ENERGY CENTER PROJECT COMPONENTS--MODIFIED ROUTE 2C	May 2005

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1.0 INTRODUCTION

1) Minor relocation of the pipeline route (move 95 feet to the east) between the southeast corner of the OMEC plant boundary and a point 1,800 feet to the south along the previously approved Route 2C; this minor relocation is proposed in response to a request from the landowner of the property
2) Use of trenching to install the pipeline over the entire length of the pipeline route instead of utilizing boring/horizontal drilling in 3 sections (2,000 feet total) as previously proposed for Route 2C; trenching is now proposed to avoid the potential for frac-out impacts to sensitive Otay tarplant habitat potentially associated with the use of drilling muds for boring/horizontal drilling
3) Narrowing of the construction right-of-way width from 75 feet (as previously proposed and approved) to 60 feet in the 3 pipeline sections (2,000 feet total) discussed under Item 2 (above) in order to minimize construction impacts to sensitive habitat
4) Elimination of the 3 temporary work areas and 1 temporary pullback area associated with the previously proposed boring/horizontal drilling operations
5) Increase in the proposed diameter of the gas pipeline diameter from 20 inches to 24 inches to accommodate the project's gas supply needs

The environmental implications of these proposed modifications to the location and construction methods for the gas pipeline route are addressed in this Petition. In summary, no unavoidable adverse significant impacts are anticipated associated with the proposed project changes.

The proposed modifications to previously approved Route 2C are based, in part, on input from the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), and the U.S. Army Corps of Engineers (ACOE). OMEC LLC submitted an Amendment to the February 13, 2003 Biological Assessment (BA) to the USFWS. Subsequent to the February 13, 2003 submittal, OMEC LLC received a request from the land owner to relocate a portion of the pipeline 95 feet to the east. This resulted in discussions with the referenced agencies and the preparation of an amended BA dated January 13, 2005. The amended BA was submitted to the EPA and USFWS for review under a reinitiated Section 7 Consultation process. In summary, the proposed modified Route 2C is considered to be environmentally preferable to the previously approved Route 2C, and no unavoidable significant impacts are expected to result from implementation of the modified Route 2C.

1.3 NECESSITY OF PROPOSED CHANGES

Section 1769 (a)(B) and (C) of the CEC Siting Regulations requires a discussion of the necessity for the proposed modifications to the OMEC project and asks whether the modifications are based on information known to the petitioner during the Certification proceeding. The proposed modifications were not known to the petitioner during the Certification proceeding; Calpine/OMEC LLC purchased the project in July of 2001 approximately 3 months following Certification. The proposed project changes are needed to achieve gas pipeline constructability and operability, minimize or avoid construction impacts on sensitive biological habitat, and to address landowner requirements. Refer to Sections 1.2 and 3.6 of this Petition for more information.

1.4 SUMMARY OF ENVIRONMENTAL IMPACTS

Section 1769 (a)(E) of the CEC Siting Regulations requires an analysis to address the impacts of proposed project modifications on the environment and the proposed measures to mitigate any significant adverse impacts. In addition, Section 1769 (a)(F) of the Siting Regulations requires a discussion of the impact of proposed modifications on the facility's ability to comply with applicable laws, ordinances, regulations, and standards (LORS). Section 3.0 of this Amendment includes a discussion of the potential impacts of the proposed changes on the environment. It also includes a discussion of the applicability of existing and proposed mitigation measures, as well as a discussion of the consistency of the proposed modifications with LORS.

1.5 CONSISTENCY OF CHANGES WITH LICENSE

Section 1769 (a)(D) of the CEC Siting Regulations requires a discussion of each proposed project modification and asks whether the modification is based on new information that would change or undermine the assumptions, rationale findings, or other bases of the CEC's final decision on the original AFC. An explanation of why the proposed changes should be permitted is also required.

None of the proposed modifications undermines the assumptions, rationale, findings or other bases of the CEC's final decision on the original AFC or subsequently submitted and approved CEC License Amendments. The modifications are expected to improve pipeline constructibility, increase operational efficiency, and avoid potential future land use conflicts.

2.0 DESCRIPTION OF PROJECT CHANGES

2.1 INTRODUCTION

Otay Mesa Generating Company, LLC (OMGC, LLC) obtained a license from the California Energy Commission (CEC) to construct and operate the Otay Mesa Generating Project (OMGP) on April 18, 2001. The project is now known as the Otay Mesa Energy Center (OMEC) and is owned by a Calpine Corporation subsidiary, OMEC Limited Liability Corporation (OMEC LLC). Calpine/OMEC LLC submitted CEC License Amendment 2 (July 2002) for natural gas pipeline Route 2C, which was approved by the CEC. This CEC License Petition proposes minor modifications to pipeline Route 2C. The proposed modified Route 2C is approximately 1.9 miles long and will connect the nominally rated 590 megawatt power plant to natural gas supplies near the U.S./Mexico border in San Diego County, California (refer to Map 1-1). For the purposes of the CEC licensing process the gas supply interconnection points include the San Diego Gas & Electric Company (SDG&E) Otay Metering Station (Point I on Map 1-1), and the point along the U.S./Mexico border where a gas pipeline from Tijuana, Mexico is planned to intersect the U.S./Mexico border (point I' on Map 1-1). The gas supply from Mexico is associated with the Transportadora de Gas Natural de Baja California de R.L. de C.V. (TGN) pipeline system. As addressed in CEC License Amendment 2, a custody transfer measurement station (proposed OMEC LLC Meter Station) will need to be constructed on the U.S. side of the border at the point where the pipeline laterals from the SDG&E Otay Metering Station and the TGN system tap point (at the U.S./Mexico border) intersect as shown on Map 1-1.

OMEC LLC proposes to modify natural gas pipeline Route 2C (refer to Map 1-1) as described in Section 1.0. Project description changes associated with Route 2C are discussed in more detail in Section 2.2.1.

2.2 PROPOSED PROJECT CHANGES

2.2.1 Proposed Modifications to Natural Gas Supply Line Route 2C

Construction and operation procedures and details for the proposed modified Route 2C would be similar to those described in the Application for Certification (AFC) (99-AFC-5), and CEC License Amendment 2. The information presented in this License Petition focuses on the aspects of Route 2C that are different from the natural gas pipeline related details presented in CEC License Amendment 2. A summary of the key project modifications for Route 2C are presented in Table 2.2-1.

2.0
DESCRIPTION OF PROJECT CHANGES

TABLE 2.2-1
SUMMARY OF KEY PROJECT MODIFICATIONS
FOR NATURAL GAS PIPELINE ROUTE 2C

Project Details	Route 2C[1] As Approved in 2002	Proposed Modified Route 2C[1]
Length (approximate)	1.9 miles[2]	1.9 miles[2]
Pipe Design	API-5LX60	API-5LX60
Pipeline Diameter(s)		
Plant site to Proposed OMEC LLC Metering Station	20"	24"
Proposed OMEC LLC Metering Station to SDG&E Otay Metering Station	20"	20"
Proposed OMEC LLC Metering Station to U.S./Mexico Border (TGN)	20"	20"
Construction/Operational ROW Widths	75'[3]/20'	Variable
Approximate Milepost 0.0 – 0.4 (Sections 1 and 2)	--[1,3]/20'	60'/20'
Approximate Milepost 0.4 – 0.55	75[1]/20'	75'/20'
Approximate Milepost 0.55 – 0.8 (Section 3)	--[1,3]/20'	60'/20'
Approximate Milepost 0.8 – 1.9	75[1]/20'	75'/20'
Approximate Total Construction/Operational ROW Disturbance Acreage	17.3/3.9[3]	16.1/4.6[4]
OMEC LLC Metering Station Acreage	0.33 acre	0.33 acre
Design Pressure	1125 psig	1125 psig
Operating Pressures	250-650 psig	250-650 psig
Design Capacity	110 MMSCFD	220 MMSCFD
Cathodic Protection	Sacrificial Anodes	Sacrificial Anodes

[1] Refer to Map 1-1 for route locations. Section 1 (approximately Milepost 0.0 – 0.3) of proposed modified Route 2C is shifted 95 feet to the east relative to Route 2C as approved in 2002 by the CEC. Sections 2 and 3 of proposed modified Route 2C (refer to Map 1-1) are no longer proposed to be directionally drilled/bored.

[2] Listed distance is from plant site property boundary to SDG&E Otay Metering Station. The additional lateral to the U.S./Mexico border is about 0.1 mile long.

[3] Additional acreage would have been required for work areas associated with directional drilling and boring locations that are no longer proposed (see Map 1-1).

[4] Refer to Table 3.6-2 for the temporary and permanent impact acreages that were used to calculate onsite and offsite biology mitigation requirements in consultation with applicable regulatory agencies. The numbers in Table 3.6-2 use slightly different assumptions based on regulatory agency guidance and, thus, vary slightly from the numbers presented in Table 2.2-1.

2.2.1.1 Route Description

The proposed modified Route 2C is approximately 1.9 miles long between the southeast corner of the power plant site and the existing SDG&E Otay Metering Station near the U.S./Mexico border. Route 2C also includes an approximately 0.1-mile long lateral stub from the proposed OMEC LLC Metering Station to the U.S./Mexico border. The area traversed by proposed Route 2C is undeveloped with the exception of the SDG&E Miguel-Tijuana 230 kV line and the SDG&E gas metering station near the border.

Proposed Route 2C runs generally south from the southeast corner of the power plant site property (point "M" on Map 1-1) for approximately 0.5 mile, including an approximately 0.2-mile long segment that traverses a toe at the base of the San Ysidro Mountains. At this point, the route proceeds due east for approximately 0.25 mile. Route 2C then proceeds due south again for approximately 0.6 mile. At this point, the route proceeds due east again for approximately 0.4 mile (to the intersection point with point "N" on Map 1-1). This segment traverses an intermittent drainage at about MP 1.5 (refer to Map 1-1). The route then travels in a southerly direction to the two gas interconnection points (points I and I' on Map 1-1).

The initial 0.3 mile of proposed modified Route 2C is shifted 95 feet to the east relative to Route 2C as previously approved by the CEC in 2002. The 95-foot shift to the east is proposed at the landowner's request to accommodate future development plans. The landowner submitted grading plans for future development to San Diego County in 2004 for the area to the west of the relocated pipeline route.

The majority of proposed Route 2C traverses non-native grassland (refer to Section 3.6, Biological Resources, for more information). Several short segments of proposed Route 2C traverse areas of Otay tarplant and/or Quino checkerspot butterfly habitat. OMEC LLC previously proposed to install the pipeline by boring or directional drilling under these sensitive biological habitat areas instead of trenching to avoid biological impacts. Based on recent consultation with the U.S. Fish and Wildlife Service and the California Department of Fish and Game, OMEC LLC now proposes to install the pipeline via trenching in these areas to avoid potential frac-out of drilling mud in these areas (refer to Sections 1, 2, and 3 on Map 1-1). To minimize biological impacts, the construction ROW is now proposed to be 60 feet wide (versus 75 feet elsewhere) along these three pipeline sections.

2.2.1.2 Pipeline Design Specifications

Pipeline design specifications are summarized in Table 2.2-1. The proposed pipeline will now be installed entirely by trenching. Typical trench dimensions are expected to be 36-40 inches wide by 6-7 feet deep. The minimum depth of cover in non-rock areas will be 3 feet. In rocky terrain, the minimum depth of cover will be 18 inches. Where appropriate, the pipeline may be installed at greater depths to avoid potential safety issues with possible future development on East Otay Mesa, including the U.S./Mexico border area.

OMEC LLC performed a geologic field reconnaissance of proposed Route 2C in May 2002. The results are summarized in Section 3.3 (Geologic Hazards and Resources). A detailed geotechnical investigation involving subsurface borings will be performed prior to construction to verify subsurface conditions.

2.2.1.3 Construction Procedures

Construction of pipeline Route 2C will generally involve the following activities:

- Surveying and staking of centerline; demarcation (e.g., fencing) of sensitive environmental areas to be avoided during construction
- ROW clearing
- Trenching (including selective topsoil salvage)
- Placement of suitable fill/pad material to protect pipe coating in rocky areas
- Pipe welding
- Lowering of pipe into the trench
- Pipe inspection
- Backfilling of trench and compaction
- Restoration of disturbed construction areas in accordance with the Revegetation Plan in the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) (RECON, 2003)

2.0 DESCRIPTION OF PROJECT CHANGES

OMEC LLC plans to use the pipeline construction ROW for access during pipeline construction.

Due to the presence of hard, near surface metavolcanic bedrock along portions of Route 2C, the buried pipeline installation will involve two different methods. Summary descriptions of the construction methods are presented below.

- **Trenching:** The trench will be excavated using trenchers and/or backhoes. The type of soils encountered determine the type of equipment used for trenching. Harder soils such as caliche, require larger trenchers and generally cannot be excavated using a backhoe. An exception to the mechanical excavation is hand digging, which is used to locate buried utilities, such as other pipelines, cables, waterlines, and sewers.

- **Blasting:** If rock is within the trenching depth, blasting may be used to excavate the trench. When there is soil at least 12 inches thick on top of the rock, then the soil is excavated by trenching, the explosive placed in the rock, and the spoils returned to the trench to minimize debris scattering and dust production. If the soil is less than 12 inches thick, then matting instead of soil is placed on top of the area to minimize debris scattering and dust production. The size and placement of charges is also strategically determined to reduce noise, debris, and dust.

- **Pipeline Heading and Stringing:** The pipe is delivered from the mill in double random lengths averaging 45 feet. In locations where it is necessary to bend the pipe, a portable bending machine is used to shape the pipe to fit the horizontal and vertical contours of the trench. If the conditions along the ROW make field bending impractical, manufactured bends are used. Pipe typically is bent before coating is applied.

  The line-up crew holds the pipe in the proper alignment using an internal or external line-up clamp. Then the pipe is secured by making weld tacks at the joints. Following the line-up crew, the welding crew applies the remaining weld passes to bring the thickness of the weld to within approximately plus 1/16-inch of the thickness of the pipe. All pipeline welds are 100 percent visually and radiographically (x-rayed) inspected.

  The line up-crew, consisting of a side-boom operator and two laborers, use a side-boom tractor to carry the line-up clamp. Each welding crew consists of a welder and a helper with a welding rig, typically mounted on a pick-up or flatbed truck.

2.0 DESCRIPTION OF PROJECT CHANGES

- **Pipe Coating:** Fusion Bonded Epoxy (FBE) coating is applied to the pipe at the mill before delivery to the construction site. However, field coating is necessary on all girth welds (joints) made at the site in order to provide a continuous layer of coating along the entire length of the pipe. After the pipe has been welded and radiographically inspected, the uncoated girth weld is then coated with a heat shrinkable polyethylene sleeve or alternatively, a primer and tape can be used.

  A detection test is conducted along the pipe to determine if any coating discontinuities exist that could allow for moisture to reach the pipe. The testing device (a holiday detector) generates an electrical potential between the pipe and an electrode in contact with the outside of the coating or ground. Pinholes in the coating of microscopic size can be located using the holiday detector. If pinholes or other damage to the coating are found, the testing crew would repair the coating by applying a two component epoxy patching compound or a heat melt stick to securely cover the damage. All coated pipe, including field joints, fittings, and bends would be tested and repaired as necessary.

  The pipe-coating crew consists of two laborers. This crew typically uses a pick-up truck to transport the coating materials.

- **Lowering and Backfilling:** The pipe is lifted and lowered into the trench by side-boom tractors spaced so that the weight of the unsupported pipe does not cause mechanical damage. Cradles with rubber rollers or padded slings are used so the tractors can lower the pipe without damaging the external coating as they travel along the trench line. Trench welds may be required whenever the trench line is obstructed by other utilities crossing the pipe trench. These welds are usually made in the trench at the final elevation, and each weld requires pipe handling for line-up, cutting to exact length, coating, and backfilling.

  Backfill material is usually obtained from the excavation trench spoils. Spoils are screened as the material is returned to the trench using standard construction screening equipment such as a padder/shader. The pipe is covered along the sides with a maximum of 12 inches of native fill, free of rocks, and then covered on top with a minimum of 12 inches of backfill, also free of rocks. This rock-free backfill zone is referred to as pipeline padding and shading.

In certain areas where damage might occur to the pipe coating from abrasive soils, clean sand earth backfill is imported to use as padding. Any padding material that must be imported is obtained from local commercial sources.

The backfill used in the remainder of the trench above the pipeline would be native material excavated during trenching. At the time of backfilling, a colored warning tape for future third-party excavators is buried approximately 18 inches above the pipeline to indicate the presence of a buried pipeline. In roadways, the backfilled soil is compacted using a roller or hydraulic tamper before paving. When it is not practical to use a mechanical device to reach the required compaction, sand slurry is used as backfill.

- **Cleanup and Installation of Signage:** The working area is graded to match adjacent elevations and the segregated topsoil is spread. The entire length of the buried pipelines is marked with aboveground pole signs indicating "Warning – Buried Natural Gas Pipeline" posted every 500 feet and at every crossing.

Due to the potential presence of hard, shallow metavolcanic bedrock along portions of Route 2C, blasting may be required in several locations to create the necessary pipeline trench. The detailed geotechnical investigation to be performed prior to final design will determine if, and where, blasting is required. If blasting is required, protective explosive matting would be used (where appropriate) to prohibit debris scatter, muffle noise, and protect public safety.

2.2.1.4 Construction Equipment

Construction of the proposed pipeline along Route 2C is anticipated to require the use of typical pipeline construction equipment as discussed in the AFC, as amended.

2.2.1.5 Construction Workforce and Schedule

Construction of the proposed pipeline along Route 2C, including the proposed OMEC LLC Metering Station, is anticipated to require an average workforce of 75 and a peak workforce of 99. The workforce will consist of foremans, equipment operators, welders, laborers, truck drivers, technicians, and restoration specialists. In accordance with CEC conditions of compliance, environmental monitors will also be present during ROW clearing, trenching, and restoration activities. It is expected that a portion of the needed workforce will be obtained from the workforce for the overall OMEC.

Construction of the proposed pipeline and metering station is estimated to require 3 to 5 months to complete. Construction activities are currently planned to begin in September 2006, although it may conditionally begin as early as July 2006.

2.2.1.6 Hydrostatic Testing

Prior to operation, the pipeline will be hydrostatically tested to verify its integrity. It is expected that hydrostatic testing will involve use of water obtained from potable water supplies at the power plant site and that a maximum of 225,000 gallons of water will be required. Following testing, the test water will be collected in tanks (e.g., tanker truck or Baker tank), and disposed of at an approved location in accordance with applicable water discharge quality standards. As practical, test water will be reused during the hydrostatic testing procedure in order to minimize the total volume of water required.

2.2.1.7 Operation and Maintenance

The proposed pipeline will supply natural gas to the OMEC over the life of the project. The flow of natural gas to the OMEC will be controlled and metered via the supply providers (SDG&E and TGN) and the planned OMEC LLC Metering Station near the U.S./Mexico border and receiving facilities at the OMEC. Communication connections will be established between the OMEC plant and the metering/regulating facilities. The pipeline ROW will be periodically inspected via foot. The entire pipeline will be marked with aboveground pole-mounted warning signs every 500 feet. The pipeline will also be periodically inspected via the use of smart pigs (devices that will travel inside the pipeline between the OMEC and the OMEC LLC Metering Station).

2.2.1.8 Abandonment

The proposed pipeline is expected to operate over the life of the project. At the end of their useful life, the pipeline and metering station will be abandoned in accordance with applicable regulations in place at that time. It is currently anticipated that aboveground metering station facilities would be removed and the metering station site would be restored or converted to another use, as appropriate. The buried pipeline would likely require purging and/or filling with an inert gas prior to capping and abandonment in place.

3.0 ENVIRONMENTAL ANALYSIS OF THE PROPOSED CHANGES

3.1 INTRODUCTION

Sections 1769(a)(E) and (F) of the CEC Siting Regulations require that the following environmental information regarding proposed changes be addressed as part of any post-certification amendment:

- An analysis of the impacts the modifications may have on the environment and proposed measures to mitigate any significant adverse impacts (Section 1769(a)(E))
- A discussion of the impact of the modifications on the facility's ability to comply with applicable LORS (Section 1769(a)(F))

The analysis is organized by environmental discipline in Sections 3.2 through 3.19. These disciplines are the same as analyzed in the original AFC and CEC License Amendment 2. As applicable, each section addresses the proposed minor modifications to natural gas supply pipeline Route 2C, including the minor realignment between milepost 0.0 – 0.3 (refer to Map 1-1).

In summary, the proposed modifications to the approved OMEC will create insignificant impacts to the environment, the public, and the adjacent property owners. With implementation of applicant-committed mitigation measures, the proposed project modifications will result in minimal impacts to the environment, including biological resources.

3.2 AIR QUALITY

The proposed project modifications will not modify operational air emissions from the approved OMEC. The proposed modifications will not result in an increase in construction equipment emissions. The proposed project modifications do not change the assumptions used to analyze the impacts of the original project, or the Conditions of Certification (COCs) for the approved project license with respect to air quality.

3.3 GEOLOGIC HAZARDS AND RESOURCES

3.3.1 Affected Environment

3.3.1.1 Geologic Formations

Proposed modified Route 2C is located within a narrow corridor approximately 2 miles long, extending south and east from the Otay Mesa Energy Center site (see Map 1-1). The property is currently undeveloped and extends across gently to moderately sloping terrain bordering the western foothills of the San Ysidro Mountains. Regional geology is essentially the same as that discussed in the Otay Mesa Generating Project Application for Certification, dated August 1999 (99-AFC-5).

A corridor approximately 300 feet wide was mapped by a Geocon Incorporated engineering geologist in May, 2002 by observing surface outcrops, aerial photographs, or logs of subsurface trenches and borings (within the portions included in the plant construction area). A summary of geologic conditions encountered along Route 2C during the May 2002 reconnaissance is presented in CEC License Amendment 2 (July 2002) which was previously approved by the CEC.

In summary, three surficial soil types and three geologic formations were observed along the alignment. The surficial deposits consist of fill, topsoil, and colluvium. The formational units consist of unnamed Fanglomerate Deposits, Otay Formation and Santiago Peak Volcanics. Refer to CEC License Amendment 2 (July 2002) for more infornmation.

3.3.1.2 Groundwater

No running groundwater or active seepage conditions were observed during the May 2002 geologic reconnaissance. However, it should be expected that the major drainage courses, colluvium and other surficial deposits are capable of perched groundwater conditions during periods of rainfall. Perched groundwater levels in drainages could seasonally affect excavation or site grading.

3.3.1.3 Mineral Resources

A review of available literature indicates that potentially economic recoverable mineral deposits within the proposed alignment corridor, including the meter station site, are nonexistent or of very limited extent. A literature review, combined with the surface geologic reconnaissance, indicates the proposed alignment does not traverse areas of economically recoverable mineral deposits.

3.3.1.4 Geologic Hazards

Faulting and Seismicity. Based on the site reconnaissance (May 2002), exploratory excavations, previous work by others, and a review of published geologic maps and reports, the alignment is not located on any known active or potentially active fault trace. The closest known active fault is approximately 14-16 miles away (Rose Canyon). In order to determine the distance of known faults to the site, the computer program EQFAULT (Blake, 1989, updated 2000) was utilized. The program calculates the distance from the site within a specified search radius to known "active" California faults that have been digitized in an earthquake catalog.

The results of the deterministic analysis indicate that the Rose Canyon Fault Zone is the closest source for potential ground motion occurring along the alignment. The Rose Canyon Fault is located approximately 14-16 miles northwest of the alignment and is considered the dominant source due to its proximity. The Rose Canyon Fault is postulated as having the potential to generate a Maximum Earthquake Magnitude of 6.9. The "maximum earthquake magnitude" is defined as the maximum earthquake that appears capable of occurring under the presently known tectonic framework (California Division of Mines and Geology Notes, Number 43). The estimated peak site acceleration based on attenuation relationships developed by Sadigh, *et al.,* (1997) was determined to be 0.16g for the Rose Canyon Fault Zone.

The pipeline could be subjected to moderate to severe ground shaking in the event of an earthquake along the Rose Canyon and/or other faults in the southern California/northern Baja California region. However, the site does not possess any greater seismic risk than that of the surrounding developments.

3.0 ENVIRONMENTAL ANALYSIS OF THE PROPOSED CHANGES

The computer program FRISKSP (Blake, 1995, updated 1998) was used to perform a site-specific probabilistic seismic hazard analysis. The program is a modified version of FRISK (McGuire, 1978) that models faults as lines to evaluate site-specific probabilities of exceedence of given horizontal accelerations for each line source. Geologic parameters not included in the deterministic analysis are included in this analysis. The program operates under the assumption that the occurrence rate of earthquakes on each mappable Quaternary fault is proportional to the fault's slip rate. The program accounts for fault rupture length as a function of earthquake magnitude, and site acceleration estimates are made using the earthquake magnitude and closest distance from the site to the rupture zone. The program also accounts for uncertainty in each of following: (1) earthquake magnitude, (2) rupture length for a given magnitude, (3) location of the rupture zone, (4) maximum possible magnitude of a given earthquake, and (5) acceleration at the site from a given earthquake along each fault. After calculating the expected accelerations from all earthquake sources, the program calculates the total average annual expected number of occurrences of a site acceleration greater than a specified value. Attenuation relationships suggested by Sadigh, *et al.,* (1997) were utilized in the analysis. The results of the analysis indicate that for a 100-year exposure period, and a 10 percent probability of occurrence, a mean site acceleration of 0.33g may be generated. This probability corresponds to a return period of approximately 949 years. For a return period of approximately 475 years, corresponding to a 50-year exposure period and a 10 percent probability of occurrence, a mean site acceleration of 0.25g may be generated.

Ancient Landslides. No ancient landslides were observed on the Route 2C alignment during the May 2002 reconnaissance or aerial photograph review.

Liquefaction. The potential for liquefaction during a strong earthquake is limited to those soils that are in a relatively loose, unconsolidated condition and located below the water table. Due to the relatively high density and grain-size distribution characteristics of the formational materials along the route (including the proposed meter station site), and the absence of a permanent water table, the risk of seismically induced soil liquefaction occurring is considered very low.

Scour Hazard. The potential for erosional scour hazard appears to be limited to the drainage-crossing east of MP 1.5. However, this drainage appears to be ephemeral with no evidence of recent groundwater or flooding.

3.3.2 Environmental Consequences

3.3.2.1 General

No soil or geologic conditions that would preclude construction of the proposed modified gas line have been identified along Route 2C. The surficial soils consisting of undocumented fill, topsoil, and colluvium, are not considered suitable for the support of the gas line in their present condition in the event that they occur within the pipe zone. Where these soils occur, remedial grading may be required. The Fanglomerate Deposits contain oversize cobbles and boulders and possible cemented zones that may be difficult to excavate. Oversize boulders that may be generated during excavation will require removal from the backfill material. The Santiago Peak Volcanics, with the exception of highly weathered, fractured or altered zones, are expected to require heavy ripping and blasting for excavations deeper than 2 to 5 feet. The generation of oversized rock may render the excavated material unsuitable for use as backfill.

With implementation of the applicant-committed mitigation measures specified in Section 3.3.3, no significant geologic related impacts are expected to occur associated with construction and operation of modified Route 2C.

3.3.2.2 Groundwater

No groundwater or active seepage was observed during the geologic reconnaissance of Route 2C performed in May 2002; however, groundwater and/or surface water should be anticipated within major drainages and within surficial soil deposits following rainy periods. Perched groundwater within drainages could impact excavation operations.

3.3.2.3 Seismic Design Criteria

Table 3.3-1 summarizes site-specific design criteria obtained from the 1997 Uniform Building Code (UBC). The values listed in Table 3.3-1 are for the Rose Canyon Fault which is identified as a Type B fault and is more dominant than the nearest Type A fault due to its proximity to the site. The Rose Canyon Fault is located approximately 14-16 miles northwest of pipeline Route 2C.

TABLE 3.3-1
SEISMIC DESIGN PARAMETERS

Parameter	Value	UBC[1] Reference
Seismic Zone Factor	0.40	Table 16-I
Soil Profile Type	S_c	Table 16-J
Seismic Coefficient, C_a	0.40	Table 16-Q
Seismic Coefficient, C_v	0.56	Table 16-R
Near-Source Factor, N_a	1.0	Table 16-S
Near Source Factor, N_v	1.0	Table 16-T
Seismic Source	B	Table 16-U

1 UBC: Uniform Building Code.

3.3.2.4 Pipeline Construction

In general, the soil conditions encountered along Route 2C can be excavated with conventional heavy duty trenching equipment. The presence of boulders in the fanglomerate and cemented material within the Otay Formation will likely increase excavation difficulties. In addition, the presence of boulders may require deepening and/or widening of the trench. Oversize rock (greater than 6 inches in size) should not be used as backfill. The Santiago Peak Volcanics, where not locally weathered, highly fractured or hydrothermally altered will likely require blasting or specialized excavation equipment.

3.3.3 Mitigation Measures

The applicant is committed to implementing CEC Conditions of Certification GEO-1 and GEO-2, as applicable to pipeline Route 2C. The applicant will commission a detailed geotechnical investigation along the alignment, to further characterize site geology. In particular, the investigation will examine the excavation characteristics of the formational materials as well as the suitability of the excavated material to be used as backfill. Construction activities will be performed in accordance with the requirements that will be specified in the Grading Permit to be obtained from the County of San Diego. Additionally, CalOSHA standards regarding trenching/excavations will be adhered to by the construction contractor.

3.3.4 References

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3.4 AGRICULTURE AND SOILS

The proposed project modifications that are addressed in this License Petition include a new minor realignment of the fuel gas pipeline between milepost 0.0 – 0.3.

3.4.1 Pipeline Realignment

The surficial soil types present along the proposed modified fuel gas pipeline Route 2C are the same as the soils identified for the previously approved Route 2C (refer to CEC License Amendment 2, July 2002).

The construction ROW is proposed to be 75-feet wide except along Sections 1, 2, and 3 (refer to Map 1-1) where the construction ROW would be limited to 60 feet in width to minimize disturbance to sensitive biological habitat. The operational ROW width would be 20 feet for the entire length of the pipeline.

As discussed in CEC License Amendment 2 (July 2002), pipeline Route 2C does not traverse any potential Prime Farmland and none of the land traversed by the proposed route is utilized for irrigated agricultural production.

Construction of modified Route 2C including the proposed OMEC LLC Metering Station is expected to temporarily disturb approximately 16 acres of soils and topography. Approximately 0.33 acre of land will be taken out of production over the life of the project at the proposed OMEC LLC Metering Station. Short-term increases in erosion are expected to

associated with construction of Route 2C. With implementation of the CEC Conditions of Certification (Soil and Water 1-3), no significant impacts to the soils resource are expected.

3.5 WATER RESOURCES

The proposed modifications to the OMEC natural gas pipeline Route 2C will not substantially affect the water resources analysis presented in the original AFC, as amended. The natural gas supply pipeline will be hydrostatically tested to verify its integrity, prior to operations. It is expected that the hydrostatic testing will involve use of 225,000 gallons of water obtained from the power plant site. The test water will be collected in tanks and disposed of at an approved location.

At approximately milepost (MP) 1.5, proposed Route 2C crosses a small, intermittent drainage. Although some potential for erosion or scour exists at the crossing of this drainage, use of Best Management Practices (BMPs) for construction and implementation of erosion control measures are expected to avoid significant impacts to the soils resource and water quality. The geotechnical investigation to be performed prior to completion of final design will determine the appropriate burial depth below the drainage to avoid scour.

With implementation of CEC Conditions of Certification (Soil and Water 1-3), no significant impacts to water resources are expected to occur.

3.6 BIOLOGICAL RESOURCES

3.6.1 Affected Environment

General biological resources surveys for Route 2C were conducted by RECON Environmental in December 2001 and January and February 2002 in the survey area defined as the construction ROW plus 1,000 feet on either side. Quino checkerspot butterfly (*Euphydryas editha quino*) flight surveys were conducted by RECON during March 2001 (RECON, 2001). Focused surveys for Otay tarplant (*Deinandra* [=*Hemizonia*] *conjugens*) were conducted along the Route 2C during June 2001. Additional surveys were conducted by RECON biologists in 2003 and 2004. Table 3.6-1 presents a summary of the biological resources along Route 2C. A more complete discussion of biological resources potentially

affected by modified Route 2C is presented in the Amendment (RECON, 2005) to the February 13, 2003 Biological Assessment (RECON, 2003).

3.6.1.1 Vegetation

Six plant communities are located within the 607.81-acre survey area. Developed land is also present. These communities and their areas are listed in Table 3.6-1.

TABLE 3.6-1
PLANT COMMUNITIES WITHIN THE ROUTE 2C SURVEY AREA

Plant Communities	Acres
Diegan coastal sage scrub	106.73
Non-native grassland	392.28
Tamarisk scrub	1.04
Fresh water marsh	2.21
Disturbed vegetation	100.17
Chamise chaparral	1.58
Developed	3.80
TOTAL	607.81

3.6.1.2 Wetlands

Wetlands and non-wetland jurisdictional waters of the U.S. within the construction right-of-way (ROW) for Route 2C were delineated by RECON during December 2001 (for a full description of the delineation and results see RECON, 2002). Three non-wetland jurisdictional waters of the U.S. range across the pipeline construction easement. The alignment also crosses three swales that drain water via sheet flow. In general, the non-wetland jurisdictional waters are vegetated with non-native annual grasses and mustard. The first crossing within the OMEC plant site is approximately 10-feet wide. The second crossing is located within Section 3 and is also approximately 10-feet wide. The third crossing, which drains a stock pond, is approximately 5-feet wide.

Three wetlands were identified within the 1,000-foot survey area. Of these three, one will be temporarily impacted by construction. This area is a freshwater marsh that is considered jurisdictional wetlands by U.S. Army Corps of Engineers (USACOE) due to the presence of

wetland vegetation, hydric soils, and primary wetland hydrology indicators. This wetland was created several decades ago when cobbles were placed within the channel to create a partial dam. Wetland vegetation consists of facultative wetland plants including cattail (*Typha latifolia*), annual beard grass (*Polypogon monspeliensis*), and curly dock (*Rumex crispus*). Russian thistle (*Salsola tragus*) and non-native annual grasses are also present. Wetland hydrology indicators observed include watermarks. This degraded marsh is approximately 5-feet wide by 15-feet long and occupies approximately 75 square feet (0.001 acre).

3.6.1.3 Wildlife

Typical wildlife species associated with Diegan coastal sage scrub, non-native grassland, and fresh water marsh plant communities were identified while conducting surveys for Route 2C. The diversity of wildlife species varies with respect to the character, quality, and diversity of vegetation communities present.

A number of bird species were observed within the survey area, including common species such as killdeer (*Charadrius vociferus vociferous*), western meadowlark (*Sturnella neglecta*), bushtit (*Psaltriparus minimus minimus*), Anna's hummingbird (*Calypte anna*), house finch (*Carpodacus mexicanus frontalis*), say's phoebe (*Sayornis saya*), black phoebe (*Sayornis nigricans semiatra)*, white-throated swift (*Aeronautes saxatalis*), mourning dove (*Zenaida macroura marginella)*, rock dove (*Columbina livia*), California towhee (*Pipilo crissalis),* song sparrow (*Melospiza melodia*), rufous-crowned sparrow (*Aimophila ruficeps canescens*), common raven (*Corvus corax clarionensis*), loggerhead-shrike (*Lanius ludovicianus*), and western scrub-jay (*Aphelocoma californica*). These birds were observed foraging and contact calling in non-native grassland. Yellow-rumped warblers (*Dendroica coronata*) were observed in a small patch of fresh water marsh within the southern region of the survey area.

Given the presence of Diegan coastal sage scrub, common avian species not observed, but expected to occur include wrentit (*Chamaea fasciata henshawi*), California thrasher (*Toxostoma redivivum redivivum*), and Bewick's wren (*Thyromanes bewickii*). Other species expected to occur within the survey area include turkey vulture (*Cathartes aura*), American crow (*Corvus brachyrhynchos hesperis*), California quail (*Callipepla californica californica*), and lesser goldfinch (*Carduelis psaltria hesperophilus*).

Four species of raptors were observed, including northern harrier (*Circus cyaneus hudsonius*), golden eagle (*Aquila chrysaetos canadensis*), white-tailed kite (*Elanus leucurus*), and red-tailed hawk (*Buteo jamaicensis).* Other raptor species expected to occur within the survey area include red-shouldered hawk (*Buteo lineatus elegans*), American kestrel (*Falco sparverius*), and Cooper's hawk (*Accipiter cooperii*).

Two mammals were detected on-site, the San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and the Pacific kangaroo rat (*Dipodomys agilis*); however, several common species are expected to occur such as California ground squirrel (*Spermophilus beecheyi*), California pocket mouse (*Perognathus californicus*), woodrat (*Neotoma* spp.), cottontail rabbit (*Sylvilagus audubonii*), and coyote (*Canis latrans*).

No amphibians were observed during the surveys. It is likely that the Pacific treefrog (*Hyla regilla*) and bullfrog (*Rana catesbeiana*) are present in the fresh water marsh habitat.

Non-native grassland and Diegan coastal sage scrub provide habitat for a number of reptiles. The San Diego horned lizard (*Phrynosoma coronatum blainvillii*) was observed in the survey area. Additional species expected to occur within the survey area include: southern Pacific rattlesnake (*Crotalus viridis helleri*), western fence lizard (*Sceloporus occidentalis*), coastal whiptail (*Cnemidophorus tigris multiscutatus*), Belding's orangethroat whiptail (*Cnemidophorus hyperythrus beldingi*), and San Diego alligator lizard (*Elgaria multicarinata webbi*).

3.6.2 Environmental Consequences

3.6.2.1 Introduction

This CEC License Petition evaluates the effects of two primary changes to gas pipeline Route 2C. The first change proposes trenching in three sections where boring or horizontal drilling was previously proposed in CEC License Amendment 2 (July 2002). The second change to Route 2C proposes relocating a portion of the pipeline 95 feet to the east to accommodate the landowner's potential future development plans.

As described in this document, three sections of the Route 2C alignment will be affected by these changes. As shown on Map 1-1, the construction technique for Sections 1, 2, and 3 will

change from boring/directional drilling to trenching. In addition, Section 1 is the portion of pipeline that has been relocated 95 feet to the east.

In order to avoid impacts to Otay tarplant (*Deinandra conjugans*) and its habitat, and Quino checkerspot butterfly (*Euphyrdryas editha quino*) habitat, CEC License Amendment 2 (July 2002) and the February 13, 2003 Biological Assessment (BA) proposed to drill or bore under these habitats at three locations along the route: the northernmost 440 feet of Section 1 runs north/south and is located immediately south of the power plant; Section 2 is located approximately 175 feet south of Section 1, running north/south along a hilltop; and Section 3 is located approximately 650 feet south of Section 2, and runs east/west through a valley and on to a hill.

Based on the initial investigation of Route 2C, a small risk of a drilling fluid (betonite) frac-out occurring during this drilling or boring was assumed. After further investigation by three different geotechnical experts and engineers, it was determined that the potential for a frac-out is high due to the already fractured nature of the rock under Route 2C. The seepage from a frac-out could surface anywhere along the route, including quino checkerspot butterfly habitat or at Otay tarplant locations and its habitat. Due to the high likelihood of a frac-out occurring, the OMEC LLC now proposes to trench through these areas rather than drilling or boring. OMEC LLC, in consultation with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG), determined that it would be preferable to execute and mitigate known and controlled impacts to these areas, rather than risk the potentially high number of scattered frac-out impacts that would require clean up and mitigation during and after construction.

3.6.2.2 Vegetation

Current land uses adjacent to Route 2C are primarily open space and fallow livestock pasture. The Route 2C construction corridor is 75-feet wide, except for Sections 1, 2, and 3, which are 60-feet wide. In the 75-foot-wide construction corridor, temporary impacts will occur to non-native grassland, Diegan coastal sage scrub, freshwater marsh, and disturbed vegetation. Permanent impacts to non-native grassland and Diegan coastal sage scrub will also occur along the 75-foot construction corridor. In the 60-foot-wide construction corridor sections, temporary impacts to non-native grassland and coastal sage scrub, and permanent

impacts to non-native grassland will occur. Table 3.6-2 summarizes the impacts to these vegetation resources.

Impacts associated with trenching Section 1 are considered to be permanent instead of temporary due to an unrelated potential development within this area. Impacts to Section 1 will be considered permanent and will be mitigated off-site.

In accordance with San Diego County's Multiple Species Conservation Plan (MSCP), mitigation ratios and requirements for project impacts to vegetation communities are shown in Table 3.6-2. A total of 12.8 acres of off-site mitigation was required by the February 13, 2003 BA to meet the mitigation requirements for the Route 2C impacts according to MSCP mitigation ratios. The additional impacts of the new trenching and pipeline relocation, and the removal of the staging areas required for boring and drilling, bring the total for required off-site mitigation to 16.25 acres. Of the 16.25 acres required, 7.19 acres are Tier III habitat (for non-native grassland) and 9.06 acres are Tier II habitat (for coastal sage scrub). This mitigation habitat will be located within the County's Biological Resource Conservation Areas (BRCA). In addition to the off-site mitigation requirements, the entire 15.03 acres of land that will be temporarily impacted will be restored according to the Revegetation Plan in Attachment Six of the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) dated October 22, 2003 (RECON, 2003).

3.6.2.3 Wetlands

Temporary impacts to jurisdictional waters of the U.S. and CDFG streambed would also occur. Route 2C crosses three non-wetland jurisdictional waters of the U.S. The first crossing is within the plant site parcel; at the crossing the channel is approximately 10 feet wide. The 75-foot construction easement would impact approximately 750 square feet. The second non-wetland jurisdictional water crossing is located within Section 3 of the sections that will be trenched instead of bored or drilled. This crossing is approximately 10 feet wide. The 60-foot-wide construction easement in this location would impact approximately 600 square feet. The third non-wetland jurisdictional water crossing is located closer to the U.S.-Mexico border. This crossing is approximately 5-feet wide. The 75-foot-wide construction easement would impact approximately 375 square feet of this drainage. Within this channel, a small and low quality freshwater marsh approximately 5-feet wide and 15-feet long, created by cobbles deliberately placed in the streambed, would be temporarily impacted. Table 3.6-2

summarizes the impacts to this freshwater marsh. The temporary impacts to jurisdictional waters of the U.S. will be mitigated on-site. After the pipeline is installed, the ground will be recontoured, preserving the continuity of the jurisdictional waters, followed by revegetation.

3.6.2.4 Wildlife and Critical Habitat

Route 2C will potentially impact three federally listed species – Otay Tarplant, Quino Checkerspot butterfly, and California gnatcatcher. Table 3.6-2 summarizes San Diego County General Plan Community Impacts, Critical Habitat Impacts, Listed Species Habitat Impacts, and USACOE Jurisdictional Water Impacts for proposed modified pipeline Route 2C.

Most of the survey area for Route 2C falls within a BRCA designated by the San Diego County MSCP. Table 3.6-2 includes acreages of temporary and permanent impact acreages within the BRCA.

3.6.3 Mitigation Measures

Although the changes proposed in this Petition to the CEC license for the Otay Mesa Energy Center are not covered by San Diego County's MSCP, they have been designed to incorporate the goals and intent of the MSCP. As such, the project is in conformance with the MSCP even though it is not bound by the MSCP. Project siting resulted in avoidance of impacts and minimization of potential adverse effects on narrow endemic species. Mitigation for unavoidable impacts will be fulfilled according to guidelines recommended in the MSCP, and by USFWS and CDFG during consultation. Since the adoption of the MSCP in 1997, the County of San Diego has expanded the coverage of the MSCP and identified a BRCA that covers most of Route 2C. The provisions of the MSCP are described in the Biological Resource Ordinance (San Diego County Ordinance No. 8845) and changes in the locations of BRCAs affects the mitigation ratios used to calculate the mitigation obligation. Most of Route 2C now falls within a BRCA designated by the San Diego County MSCP. A total of 6.52 acres of non-native grassland, 3.47 acres of coastal sage scrub, and 0.001 acre of freshwater marsh to be temporarily impacted are within the BRCA. Permanent impacts within the BRCA include 2.51 acres of non-native grassland and 0.37 acres of coastal sage scrub. Mitigation for these impacts is discussed above in Section 3.6.2.2 and shown on Table 3.6-2.

TABLE 3.6-2
SUMMARY OF BIOLOGICAL IMPACTS AND MITIGATION REQUIREMENTS

	Non-native Grassland (MSCP Tier III)				Diegan Costal Sage Scrub (MSCP Tier II)				Freshwater Marsh (MSCP Tier I)			TOTAL Mitigation Acres	
Impact Type	Impact Acres	Off-site Mitigation Ratio[1]	Off-site Mitigation (acres)[2]	On-site Revegetation (acres)	Impact Acres	Off-site Mitigation Ratio[1]	Off-site Mitigation (acres)[2]	On-site Revegetation (acres)	Impact Acres	Mitigation Ratio	Mitigation Acres	Off-site Acquisition	On-site Revegetation
General Plan Community Impacts													
Temporary (in BRCA)	6.52	0.5:1	3.26	6.52	3.47	1.5:1	5.21	3.47	0.001	N/A	No Mitigation Required	7.64 (0.83 of the required 8.47 acres was previously mitigated as Plant Site mitigation)	9.99
Temporary (not in BRCA)	4.35	0.5:1	2.18	4.35	0.69	1:1	0.69	0.69	–	–	–	2.87	5.04
Permanent (in BRCA)	2.51	0.5:1	1.26	–	0.37	1.5:1	0.56	–	–	–	–	1.82	–
SUB-TOTAL	13.38	–	6.70	10.87	4.53	–	6.46	4.16	0.001	N/A	No Mitigation Required	**12.33**	**15.03**
Critical Habitat Impacts[3]													
QCB – Temporary	10.87	0.5:1	5.44	10.87	4.16	Ratio varies	4.85	4.16	–	–	–	0.00 (the required 10.29 acres are mitigated above)	0.00 (the required 15.03 acres are mitigated above)
QCB – Permanent	2.51	0.5:1	1.26	–	0.37	1.5:1	0.56	–	–	–	–	0.00 (the required 1.82 acres are mitigated above)	–
CAGN – Temporary	–	–	–	–	0.87	0.5:1	0.44	0.87	–	–	–	0.00 (the required 0.44 acre is mitigated above)	0.00 (the required 0.87 acre is mitigated above)
CAGN – Permanent	–	–	–	–	0.37	1.5:1	0.56	–	–	–	–	0.00 (the required 0.56 acre is mitigated above)	–
Otay Tarplant – Temporary	3.51	0.5:1	1.76	3.51	1.97	1.5:1	2.96	1.97	–	–	–	0.00 (the required 4.72 acres are mitigated above)	0.00 (the required 5.48 acres are mitigated above)
Otay Tarplant – Permanent	2.51	0.5:1	1.26	–	0.47	1.5:1	0.71	–	–	–	–	0.00 (the required 1.97 acres are mitigated above)	–
Riverside Fairy Shrimp – Temporary	8.74	0.5:1	4.37	8.74	3.24	1:1	3.24	3.24	–	–	–	0.00 (the required 7.61 acres are mitigated above)	0.00 (the required 11.98 acres are mitigated above)
SUB-TOTAL	28.14	–	14.09	23.12	11.45	–	13.32	10.24	–	–	–	**0.00**	**0.00**
Listed Species' Habitat Impacts[4]													
Otay Tarplant Individuals	6 plants	3:1	18 plants	6 plants	–	–	–	–	–	–	–	18 plants	6 plants
Occupied Otay Tarplant – Temporary	0.25	3:1	0.75	0.25	–	–	–	–	–	–	–	0.62 (0.13 of the required 0.75 acre is mitigated above)	0.00 (the required 0.25 acre is mitigated above)
Moderate Potential Otay Tarplant – Temporary	0.34	–	–	0.34	–	–	–	–	–	–	–	–	0.00 (the required 0.34 acre is mitigated above)
Moderate Potential Otay Tarplant – Permanent	0.47	2:1	0.94	–	–	–	–	–	–	–	–	0.70 (0.24 of the required 0.94 acres are mitigated above)	0.00 (the required 0.47 acre is mitigated above)
QCB Suitable Habitat – Temporary	–	–	–	–	1.73	3:1	5.19	1.73	–	–	–	2.60 (2.59 of the required 5.19 acres are mitigated above)	0.00 (the required 1.73 acres are mitigated above)
SUB-TOTAL	1.06	–	1.69	0.59	1.73	–	5.19	1.73	–	–	–	**3.92**	**0.00**

TABLE 3.6-2 (CONTINUED)
SUMMARY OF BIOLOGICAL IMPACTS AND MITIGATION REQUIREMENTS

Impact Type	Non-native Grassland (MSCP Tier III)				Diegan Costal Sage Scrub (MSCP Tier II)				Freshwater Marsh (MSCP Tier I)			TOTAL Mitigation Acres	
	Impact Acres	Off-site Mitigation Ratio[1]	Off-site Mitigation (acres)[2]	On-site Revegetation (acres)	Impact Acres	Off-site Mitigation Ratio[1]	Off-site Mitigation (acres)[2]	On-site Revegetation (acres)	Impact Acres	Mitigation Ratio	Mitigation Acres	Off-site Acquisition	On-site Revegetation
TOTAL OFF-SITE MITIGATION REQUIRED	**7.19** (1.20 of the required 8.39 is mitigated above or previously mitigated)				**9.06** (2.59 of the required 11.65 is mitigated above)				–	–	–	**16.25**	**15.03**
USACOE Jurisdictional Water of the U.S.	Impact Acres				Mitigation Ratio				Total Mitigation Acres				
Wetland Waters[5]	0.001				No Mitigation Required				–				
Non-wetland Waters	0.04				1:1				Non-wetland Waters Impacts are Mitigated Above in the General Plants Community Mitigation Section				
TOTAL	0.04				–				–				

Source: RECON, 2005.

[1]Mitigation ratios for habitat tiers are consistent with Attachment M, San Diego County Biological Ordinance (BMO), which takes into account the habitat tier where the impact occurs and where the mitigation land is acquired. For OMEC, the mitigation acreage is all within a Biological Resources Conservation Area (BRCA).

[2]Off-site mitigation will be in the form of acquisition and preservation of habitat with elements required as discussed in this document.

[3]If the habitat that fulfills mitigation requirements for general plant community impacts and impacts to listed species' critical habitat does not contain the required amount of QCB, CAGN, and Otay tarplant critical habitat, additional mitigation within the appropriate critical habitat(s) will be required.

[4]If the habitat that fulfills mitigation requirements for general plant community impacts and impacts to listed species' critical habitat does not contain the required amount of QCB and Otay tarplant habitat with the required habitat elements, additional mitigation within the appropriate habitat(s) will be required.

[5]No mitigation is necessary for a temporary impact to 0.001 acre.

In accordance with San Diego County's MSCP, mitigation ratios and requirements for project impacts to vegetation communities, have been considered and included in the Amendment to the Biological Assessment (RECON, 2005). Refer to Table 3.6-2 for proposed mitigation acreage requirements. Impacts to vegetation will be mitigated in two ways. The areas where temporary disturbance occurs will be restored and mitigated where the impact occurs. Therefore, this form of mitigation for vegetation impacted inside the BRCA will be mitigated within the BRCA and vegetation impacted outside of the BRCA will be mitigated outside of the BRCA. Revegetation of temporary project impact locations is described in the Otay Mesa Generating Project Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). Mitigation for disturbance to habitat will also be acquired and endowed for management in perpetuity at an offsite location approved by USFWS and CDFG consistent with MSCP mitigation ratios.

General mitigation measures and species-specific mitigation measures during all construction activities are detailed within BRMIMP. Additional species specific mitigation measures are discussed below.

3.6.3.1 Quino Checkerspot Butterfly

To prevent impacts to quino checkerspot butterfly from construction of the pipeline along modified Route 2C, vegetation removal (grading) of the quino checkerspot butterfly habitat within trenching Sections 2 and 3 (refer to Map 1-1) should take place between June 1 and January 1, which is outside of the typical quino checkerspot butterfly post-diapause and adult flight periods of January through May.

3.6.3.2 Quino Checkerspot Butterfly Habitat

Temporary direct impacts will occur to 1.73 acres of quino checkerspot butterfly habitat within Sections 2 and 3 when the construction corridor is graded. These impacts will be mitigated by the following measures: 1) revegetation of the quino checkerspot butterfly habitat, including host and nectar sources, after construction is complete; 2) the acquisition and preservation of 9.06 acres of coastal sage scrub vegetation, 1.73 acres of which contain quino checkerspot butterfly habitat components such as food and nectar plants; and 3) the presence of an environmental compliance monitor while construction fencing is being installed around the boundary of the construction corridor, prior to the grading of the construction corridor, to ensure impacts to habitat are minimized.

Indirect impacts due to dust can be kept to a minimum by covering blast holes, reducing speed limits along access roads and watering the roads. In addition, to limit the introduction of additional non-native species along Route 2C, the construction corridor and adjacent native habitat will be monitored for excessive weed growth. These species will be removed, as necessary, under the supervision of the designated biologist.

To prevent off road vehicles and construction vehicles from creating new roadways during construction, signage and construction fencing will be put in locations that will define the project boundary and encourage off highway vehicle (OHV) motorists to use existing roads.

3.6.3.3 Quino Checkerspot Butterfly Critical Habitat

Temporary and permanent impacts to coastal sage scrub and non-native grassland vegetation within quino checkerspot butterfly critical habitat will be mitigated at the same ratio as the general plant community impacts. As discussed in the Biological Resources Monitoring Implementation and Mitigation Plan (BRMIMP) (RECON 2003), on-site revegetation will be completed on all of the temporarily impacted areas within quino checkerspot butterfly critical habitat. Additional mitigation for impacts to quino checkerspot butterfly critical habitat will be in the form of purchase and preservations of off-site habitat within quino checkerspot butterfly critical habitat.

3.6.3.4 Coastal California Gnatcatcher Habitat and Critical Habitat

Temporary and permanent impacts to coastal sage scrub within coastal California gnatcatcher critical habitat will be mitigated at the same ratio as the general plant community impacts. As discussed in the BRMIMP (RECON 2003), on-site revegetation will be completed on all of the temporarily impacted areas within coastal California gnatcatcher critical habitat. Additional mitigation for impacts to coastal California gnatcatcher critical habitat will be in the form of purchase and preservations of off-site habitat within coastal California gnatcatcher critical habitat.

3.6.3.5 Coastal California Gnatcatcher Active Nests/Noise

To avoid potential impacts to nesting coastal California gnatcatchers, vegetation removal (grading) within the Route 2C construction corridor should take place between September 1 and February 14, which is outside of the coastal California gnatcatcher breeding season of February 15 to August 31.

If grading must take place during the coastal California gnatcatcher breeding season of February 15 to August 31, a survey for active coastal California gnatcatcher nests will be conducted within the construction route within one week prior to construction. If an active coastal California gnatcatcher nest is detected within the Route 2C construction corridor, no grading, brushing or clearing will take place within 500 feet of the nest until the young have fledged and are no longer dependent on the nest, unless otherwise approved by USFWS.

In addition, if construction activities other than grading or brush clearing must take place within the coastal California gnatcatcher breeding season of February 15 to August 31, the coastal sage scrub vegetation within 500 feet of the Route 2C corridor will be monitored weekly to identify any active coastal California gnatcatcher nests adjacent to the construction corridor.

If an active coastal California gnatcatcher nest is located within 500 feet of the Route 2C construction corridor, the project biologist will coordinate with USFWS to determine the appropriate mitigation measures. These measures may include monitoring the nest daily to determine if the project activities are disturbing or disrupting the nesting activities, and consequently making feasible recommendations to reduce the noise and/or disturbance in the vicinity such as: 1) turning off vehicle engines and other equipment whenever possible to reduce noise; 2) installing a protective noise barrier between the nesting coastal California gnatcatchers and the project activities; and 3) working in other areas until the young have fledged.

3.6.3.6 Otay Tarplant, Moderate Potential and Occupied Habitat

Mitigation for impacts to Otay tarplant moderate potential and occupied habitat will be provided as described in Table 3.6-3. These mitigation requirements are also reflected in Table 3.6-2.

The 1.69 acres of off-site mitigation required for impacts to occupied and moderate potential Otay tarplant must be comprised of suitable Otay tarplant habitat as defined by URS in Appendix A of the September 13, 2000 BA for the Otay Mesa Generating Project (URS 2000). This habitat must have at least 18 Otay tarplant individuals present. If no Otay tarplant individuals are present, a revegetation plan detailing methods that will be used to establish at least 18 Otay tarplant individuals within the preserved habitat will be required.

TABLE 3.6-3
OTAY TARPLANT MITIGATION REQUIREMENTS

Type of Impact	Temporary Impacts (acres)	Off-site Mitigation Ratio[1]	On-site Revegetation Ratio
Any	Known occurrence[2]	3:1	1:1
Permanent	High potential	3:1	-
Temporary	High potential	1:1	1:1
Permanent	Moderate potential	2:1	–
Temporary	Moderate potential	–	1:1

1 Ratio of off-site acquisition (both acreage and plants) of occupied habitat.

2 Known occurrences per project surveys and USFWS database.

RECON will conduct pre-construction surveys for Otay tarplant along Route 2C in the spring of 2005. If additional plants are observed, these plants will be mitigated at the rate depicted in Table 3.6-3.

In addition to the mitigation above, the presence of an environmental compliance monitor while construction fencing is being installed around the boundary of the construction corridor, prior to the grading of the construction corridor, will ensure impacts are minimized.

3.6.3.7 Otay Tarplant Critical Habitat

Temporary and permanent impacts to non-native grassland within Otay tarplant critical habitat will be mitigated at the same ratio as the general plant community impacts. As discussed in the BRMIMP (RECON 2003), on-site revegetation will be completed on all of the temporarily impacted areas within Otay tarplant critical habitat. Additional mitigation for impacts to Otay tarplant critical habitat will be in the form of purchase and preservations of off-site habitat within Otay tarplant critical habitat.

3.6.4 Conclusions

Biological mitigation measures, developed through consultations with USFWS, CDFG, and USACOE are summarized herein and discussed in detail in the Amendment to the Biological Assessment (RECON, 2005). With implementation of the specified measures, it is expected that the proposed actions will not jeopardize the continued existence of any threatened or endangered species with the potential for occurrence in Route 2C.

In accordance with San Diego County's MSCP, mitigation ratios and requirements for project impacts to vegetation communities are shown in Table 3.6-2. The mitigation required for these impacts totals 16.25 acres of off-site mitigation and 15.03 acres of on-site revegetation. Revegetation will include replacing any sensitive plants or habitat components, such as food and nectar plants for the quino checkerspot butterfly, that may have been impacted during construction. Details on revegetation in Route 2C can be found in the Revegetation Plan, Attachment 6 of the BRMIMP (RECON, 2003). Refer to the 2005 Amendment to the BA for more information.

3.6.5 References

RECON, 2005. Amendment to the Biological Assessment for the Application for Certification for Amendments 1A, 1B, and 2 for the Otay Mesa Generating Project.

2003. Final Biological Assessment for the Application for Certification for Amendments 1A, 1B, and 2 for the Otay Mesa Generating Project.

2003. Otay Mesa Generating Project Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). October 22, 2003.

2002. Biological Assessment for the Application for Certification for Amendments 1A, 1B, and 2 for the Otay Mesa Generating Project.

2001. Otay Mesa Generating Project Diegan Coastal Sage Scrub and Southern Willow Scrub Revegetation Plan. September 5.

2001. Quino Checkerspot Butterfly Flight Survey Report for the Auxiliary Natural Gas Routes of the Otay Mesa Generating Project. June 7.

3.7 CULTURAL RESOURCES

Cultural resources include archaeological and historical objects, sites and districts, historic buildings and structures, cultural landscapes, and sites and resources of concern to local Native Americans and other ethnic groups.

The cultural resources analysis which was presented in CEC License Amendment 2 (July 2002), including the confidential technical appendix (Appendix J, Supplement 2), is

applicable to modified gas pipeline Route 2C. The proposed shift of the pipeline by 95 feet to the east (see Section 1 on Map 1-1) traverses an area that was surveyed in 2001 as part of CEC License Amendment 2.

For the purposes of this evaluation, all recorded resources which have not previously been evaluated under the National Register of Historic Places (NRHP) or California Environmental Quality Act (CEQA)/California Register of Historic Places (CRHP) criteria, with the exception of isolate artifacts and isolate features which appear to lack integrity or data potential, are addressed as if they were eligible for the NRHP/CRHP. It is proposed, as an element of project design, that all recorded resources be completely avoided. However if it appears that avoidance of any resource through project design will not be possible, the significance of that resource will be formally evaluated vis a vis the criteria of the NRHP and/or Section 15064.5 of CEQA (or PRC 21083.2 for unique archaeological resources) and the CRHP. If the site is found to be significant, a data recovery program, or other appropriate mitigative effort, will be undertaken in consultation with the CEC.

Site significance evaluations undertaken on Otay Mesa by Gallegos & Associates for the OMEC are guided by the protocols set forth in the State Historic Preservation Office (SHPO)-approved cultural resources management plan that guides all cultural resources studies undertaken on Otay Mesa. An archaeological testing plan was prepared for the CEC as part of the AFC process for the OMEC. Pursuant to direction from CEC the guidance set forth in that document was determined sufficient to guide any archaeological testing required along Route 2C (Reinoehl, 2002). Three sites were identified for archaeological testing; they are CA-SDI-11973, -11974, and -11975. Based on the results of the testing program conducted in the spring of 2002, none of these sites exhibit characteristics that would qualify for the NRHP or the CRHP (Gallegos, 2002).

3.7.1 Affected Environment

The baseline environment for cultural resources is detailed in Section 5.7.1 of the AFC (99-AFC-5, as amended). The entire route, including the proposed meter station area, has been surveyed for cultural resources. Route 2C (including work areas) was surveyed for cultural resources by Gallegos & Associates in November 2001 and May 2002. Two laterals are located at the south end of Route 2C. A short (less than 150 feet) lateral runs west from the pipeline to the existing SDG&E Otay metering station. This lateral was encompassed within the original survey conducted for Route 2B and reported in the AFC. A new metering station (120 feet by 120 feet) will be constructed at the point where the lateral from the SDG&E metering station joins Route 2C. The footprint of this new station is within the survey

corridor for Route 2C. Another lateral will run south from the terminus of Route 2C to the Mexican border. This segment approximately 400 feet in length was surveyed as part of the Route 2B refinement survey conducted in August 2000. The proposed 95-foot shift of approximately 1800 feet of pipeline is also within the survey corridor for Route 2C. Within the approximately 1.94 mile long by 300-foot-wide study corridor, six prehistoric sites have been previously recorded; CA-SDI-8653, CA-SDI-10297, CA-SDI-11793, CA-SDI-11794, CA-SDI-11795, and CA-SDI-12877. The sites include one habitation/historic site, and five lithic scatters. Refer to CEC License Amendment 2 (July 2002) for more information regarding these six prehistoric sites.

3.7.2 Environmental Consequences

Under CEQA Appendix G, a project potentially would have significant impacts if it would cause substantial adverse change in the significance of an historical resource (i.e. a cultural resource eligible to the CRHP, or archaeological resource defined as a unique archaeological resource which does not meet CRHP criteria), or would disturb human remains. A nonunique archaeological or paleontological resource need be given no further consideration, other than the simple recording of its existence by the lead agency.

Under the implementing regulations of Section 106 of the National Historic Preservation Act (36 CFR 800), impacts to identified cultural resources need be considered only if the resource is a "Historic Property"; that is, only if it meets the criteria of eligibility for the National Register of Historic Places (36 CFR 60.4).

3.7.2.1 CA-SDI-10297

Construction for Route 2C will intersect the southern margin of CA-SDI-10297. As depicted in Figure 17-2 of the test results report (Gallegos et.al., 2000) this is outside the area of the site that was identified as containing significant cultural deposits No significant impacts are anticipated at this location.

3.7.2.2 CA-SDI-11793

Based on the preliminary results of the testing program (Gallegos, n.d.) CA-SDI-11793 does not appear to be a significant cultural resource under NRHP or CRHP criteria. No significant impacts are anticipated at this location.

3.7.2.3 CA-SDI-11795

Based on the preliminary results of the testing program (Gallegos, n.d.) CA-SDI-11795 does not appear to be a significant cultural resource under NRHP or CRHP criteria. No significant impacts are anticipated at this location.

3.7.2.4 CA-SDI-11794

Based on the preliminary results of the testing program (Gallegos, n.d.) CA-SDI-11794 does not appear to be a significant cultural resource under NRHP or CRHP criteria. No significant impacts are anticipated at this location.

3.7.2.5 CA-SDI-12877

Based on the results of the testing program (Gallegos, 2000) CA-SDI-12877 does not appear to be a significant cultural resource under NRHP or CRHP criteria. No significant impacts are anticipated at this location.

3.7.2.6 CA-SDI-8653

Site CA-SDI-8653 was previously tested and identified as not eligible for listing in the NRHP (McDonald et. al., 1998). Based on the results of the recent archaeological evaluations undertaken at CA-SDI-8653, no significant impacts are anticipated at this location.

3.7.3 Mitigation Measures

The same general mitigation measures set forth in Section 5.7.3.1 of the AFC apply to this License Petition. The project owner shall also comply with the measures set forth in the Cultural Resources Mitigation and Monitoring Plan (URS, 2001) and the cultural resources Conditions of Certification in the Presiding Members Decision for the OMGP. In addition to implementation of those measures it is recommended that an archaeological monitor be present during all new ground disturbing activity at each of the six archaeological sites described in Section 3.7.2 of this CEC License Petition.

3.7.4 LORS

The same LORS described in Sections 5.7.5 and 7.4.9 of the AFC (99-AFC-5) for cultural resources apply to this License Petition. The proposed project modifications are consistent with the previously identified LORS.

3.7.5 References

Clark, N. 1981. Site Form for CA-SDI-8653. On file, South Coastal Information Center, San Diego State University, San Diego, California.

California Energy Commission. 1997. *Rules of Practice and Procedure & Power Plant Site Certification.* California Energy Commission. Sacramento. February, 1987.

1992. *Instructions to the California Energy Commission Staff for the Review of and Information Requirements for an Application for Certification.* California Energy Commission, Energy Facilities Siting and Environmental Protection Division. Sacramento.

Cultural Systems Research, Inc. 1982a. Proposed Miguel Substation Expansion Area Project: Surface Reconnaissance Letter Report Volumes I and II. On file, South Coastal Information Center, San Diego State University, San Diego, California.

1982b. Identification and National Register Assessment Program for the Proposed Miguel-Tijuana 230kV International Interconnection Project. Vols. I-IV. On file, South Coastal Information Center, San Diego State University, San Diego, California.

1983. Cultural Resource Data Recovery Program of the Proposed Miguel-Tijuana 230kV International Interconnection Project. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Gallegos & Associates. 2002. Cultural Resource Test Report for the Otay Mesa Generating Project Alternate Natural Gas Supply Line, San Diego, California. Confidential.

Gallegos, Dennis R., Nina M. Harris, Sinéad Ní Ghabhláin, and Brian Hatoff. 1999. Historical/Archaeological Inventory Report for the Otay Mesa Generating Company,

LCC. Project, San Diego, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Gallegos, Dennis R., Jeffrey Flenniken, Tracy A. Stropes, and Brian Hatoff. 2000. Cultural Resource Test Results for the Otay Mesa Generating Project, San Diego County, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Gross, Timothy. 1989a. Site form for CA-SDI-11793. On file, South Coastal Information Center, San Diego State University, San Diego, California.

1989b. Site form for CA-SDI-11794. On file, South Coastal Information Center, San Diego State University, San Diego, California.

1989c. Site form for CA-SDI-11795. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Guerra, Susan. 1994. State Office of Historical Preservation. Personal communication with S. Morgan (Woodward-Clyde Consultants). July 9, 1994.

McDonald, Meg, James D. Eighmey, and Drew Pallette. 1998. National Register Significance Evaluation of Six Sites for the Border Lights Project on Otay Mesa, San Diego County, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Ogden and Gallegos & Associates. 1993. Otay Mesa Specific Plan Cultural Resources Technical Report. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Reinoehl, Gary. 2002. California Energy Commission. Personal communication with B. Hatoff (URS). January 30, 2002.

Robbins-Wade, Mary and Timothy Gross. 1990. Historic Properties Inventory for the Southeast Otay Mesa Sludge Processing Facilities and Pipeline (from Southern Otay Mesa Sludge Processing Facility to Southeast Otay Mesa Sludge Processing Facility), San Diego, California.

Smith, Brian F. 1984. Site form for CA-SDI-10297. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Smith, Brian F. and James R. Moriarty, III. 1985. An Archaeological Reconnaissance of the Proposed San Diego Motor Racing Park, Otay Mesa, San Diego County. On file, South Coastal Information Center, San Diego State University, San Diego, California.

URS. 2001. Otay Mesa Generating Project Cultural Resources Mitigation and Monitoring Plan. Report on file with the California Energy Commission, Sacramento, California.

1999. Application for Certification for the Otay Mesa Generating Project (99-AFC-5). Report on file with the California Energy Commission, Sacramento, California.

3.8 PALEONTOLOGICAL RESOURCES

Paleontological resources are the mineralized (fossilized) remains of prehistoric plant and animal organisms, as well as the mineralized impressions (trace fossils) left as indirect evidence of the form and activity of such organisms. These resources are considered to be non-renewable resources significant to our culture under state and federal law.

The paleontological resources analysis presented in CEC License Amendment 2 (July 2002), including the confidential technical appendix (Appendix K, Supplement 2), is applicable to modified gas pipeline Route 2C.

3.8.1 Affected Environment

The baseline environment for paleontological resources is detailed in Section 5.8.1 of the AFC. Map 3.2-1 depicts the new project component and areas subject to paleontological resources survey. The entire Route 2C, including the proposed OMEC LLC meter station area has been surveyed for paleontological resources. Route 2C was surveyed for paleontological resources by PaleoResource Consultants in November and December 2001. Two laterals are located at the south end of Route 2C. A short (less than 150 feet) lateral runs west from the pipeline to an existing SDG&E metering station. This lateral was encompassed within the original survey conducted for Route 2B and reported in the AFC. A new metering station (120 feet by 120 feet) will be constructed at the point where the lateral from the SDG&E metering station joins Route 2C. The footprint of this new station is within the survey corridor for Route 2C. Another lateral will run south from the terminus of Route 2C

to the Mexican border. This segment approximately 400 feet in length was surveyed as part of the Route 2B refinement survey conducted in August 2000.

An inventory of the paleontological resources of each rock unit exposed in or near the proposed pipeline right-of-way (ROW) is presented below and the paleontological importance of these resources is assessed. The literature review and San Diego Museum of Natural History (SDMNH) archival search conducted for this inventory documented no previously recorded fossil sites within the narrow linear corridor of the natural gas pipeline. However, a number of fossil sites have been documented as occurring in sediments of the Otay Formation (Demere, 1988 [SDMNH records]) near the proposed pipeline ROW, including at the OMEC plant. No fossil remains were found at a previously unrecorded fossil site during the field survey of the proposed pipeline ROW and vicinity conducted for this inventory.

3.8.1.1 Santiago Peak Volcanics

The only fossils reported from the Santiago Peak Volcanics are a meager marine molluscan fauna described by Fife and others (1967) from slightly metamorphosed shales in the vicinity of Del Mar north of San Diego.

3.8.1.2 Otay Formation

Demere (1988) reported the first identifiable fossils from the Otay Formation. Since that time, the Otay Formation has yielded fossil remains at numerous sites on the Otay Mesa and in the vicinity. These remains include ostracods, freshwater snails, unidentified plant remains ("reeds"), and the bones and/or teeth of reptiles (lizards and tortoise), birds, and a diversity of extinct land mammals, including oreodonts, camels, canids, rabbits, squirrels, mountain beavers, and rodents (Demere, 1988 [SDMNH records]). In addition to these previously reported occurrences, during paleontological monitoring at the OMEC plant site paleontological compliance personnel discovered fossil bones and teeth of extinct mammals, ichnofossils (burrow and root casts), and paleosols (fossil soils) in the Otay Formation exposed during grading at the OMEC plant site. The plant site is located at the north end of the proposed pipeline.

3.8.2 Environmental Consequences

Often, only monitoring during excavation can reveal the paleontological content of a formation at a specific impact location. However, for the purposes of this analysis, and in keeping with CEC guidance, the assumption is made that "if the rock units in the geologic formations which are to be disturbed have a high or moderate potential to contain fossil materials, these formations are considered likely to incur impacts" (CEC, 1992:3.10-5).

3.8.2.1 Santiago Peak Volcanics

This formation is unlikely to yield significant fossil resources.

3.8.2.2 Otay Formation

Sediments referable to the Otay Formation have produced numerous fossils and locally contain concentrations of continental vertebrate, invertebrate, and plant fossils. Several previously recorded fossil localities are found near the proposed pipeline ROW, including at the OMEC plant site located at the north end of the proposed pipeline. Although no previously reported fossils are known to directly underlie the pipeline ROW, the presence of previously recorded fossil sites in Otay Formation sediments similar to those that underlie the pipeline ROW suggests that there is a high potential for additional fossil remains being uncovered by excavations during construction of this new pipeline. Because the Otay Formation has in the past produced significant fossils, using SVP (1995) criteria, this unit is judged to be highly sensitive to impacts from construction. Additional identifiable fossil remains recovered from the Otay Formation during pipeline construction would be scientifically important and significant.

3.8.3 Mitigation Measures

The same general mitigation measures set forth in Section 5.8.3.1 of the AFC apply to this License Petition. The project owner shall also comply with the measures set forth in the Paleontological Resources Mitigation and Monitoring Plan (URS, 2001) and the paleontological resources Conditions of Certification in the Presiding Members Decision for the OMGP. In addition to implementation of those measures it is recommended that a paleontological resources monitor be present during all new subsurface ground disturbing activity along those portions of Route 2C which traverse the Otay Formation.

3.8.4 LORS

The same LORS described in Sections 5.8.5 and 7.4.9 of the AFC for paleontological resources apply to this License Petition. The proposed project changes are consistent with the applicable LORS.

3.8.5 References

California Energy Commission. 2000 Paleontological resources: *in* Regulations pertaining to the rules of practice and procedure & power plant site certification, California Energy Commission, Sacramento, CA, 3 p.

1992. *Instructions to the California Energy Commission Staff for the Review of and Information Requirements for an Application for Certification.* California Energy Commission, Energy Facilities Siting and Environmental Protection Division. Sacramento.

Demere, T. A. 1988. Early Arikareean (Late Oligocene) vertebrate fossils and biostratigraphic correlations of the Otay Formation at Eastlake, San Diego County, California: p. 35-41 *in* Filewicz, M. V., and Squires, R. L., editors, Paleogene stratigraphy, West Coast of North America, Pacific Section SEPM, West Coast Paleogene Symposium, vol. 58, 289 p.

Fife, D. L., Minch, J. A., and Crampton, P. J. 1967. Late Jurassic age of the Santiago Peak Volcanics, California: Geological Society of America Bulletin, vol. 78, p. 299-304.

Society of Vertebrate Paleontology. 1996. Conditions of receivership for paleontologic salvage collections: Society of Vertebrate Paleontology News Bulletin, vol. 166, p. 31-32.

1995. Assessment and mitigation of adverse impacts to nonrenewable paleontologic resources – standard guidelines: Society of Vertebrate Paleontology News Bulletin, vol. 163, p. 22-27.

1991. Standard measures for assessment and mitigation of adverse impacts to nonrenewable paleontological resources: Society of Vertebrate Paleontology News Bulletin, vol. 152, p. 2-5.

URS. 2001. Otay Mesa Generating Project Paleontological Resources Mitigation and Monitoring Plan. Report on file with the California Energy Commission, Sacramento, California.

1999. Application for Certification for the Otay Mesa Generating Project (99-AFC-5). Report on file with the California Energy Commission, Sacramento, California.

1999. Appendix K, Paleontological Resource Assessment, Otay Mesa Generating Project (99-AFC-5). Report on file with the California Energy Commission, Sacramento, California.

3.9 LAND USE

The proposed modifications to the OMEC gas pipeline Route 2C that are addressed in this License Petition do not affect the land use impact assessment presented in Section 5.9 of the AFC. The proposed pipeline alignment and metering station are both located in areas previously analyzed in the original AFC. The proposed 95-foot shift to the east on the initial portion of the modified Route 2C (see Section 1 on Map 1-1) is proposed at the landowner's request to avoid potential land use conflicts associated with potential future development in this area. The Applicant is preparing several submittals for the new metering station (e.g., Building Permit Application [including Grading and Drainage Plan]) to meet County of San Diego requirements. These items will be docketed at the CEC as well. Due to the close proximity of the previously analyzed Route 2C and the proposed modified Route 2C, land use and zoning designations are the same for the new route. Currently, the proposed modified Route 2C and the proposed metering station have an undeveloped land use designation. Development in this area includes the existing SDG&E Otay Metering Station approximately 120 feet west of the proposed metering station, the adjacent, existing Miguel-Tijuana 230 kV line, and the U.S./Mexico border fence approximately 400 feet to the south. Refer to CEC License Amendment 2 (July 2002) for more information regarding land use, including current land use and zoning designations along Route 2C. The amendments to the County of San Diego's East Otay Mesa Specific Plan do not affect the consistency of the proposed OMEC LLC project modifications with applicable land use related policies. No adverse land use impacts are expected with the proposed project changes.

3.10 SOCIOECONOMICS

As discussed in Section 5.10.2 (Socioeconomics – Environmental Consequences) of the AFC, as amended, construction of Route 2B was envisioned to require a workforce of 30 persons for 30 days. As discussed in CEC License Amendment 2 (July 2002), construction of Route 2C is expected to require an average workforce of 75 and a peak workforce of 99 over a 3 to 5 month period. The implementation of modified Route 2C, instead of the previously approved Route 2C, does not affect the insignificant socioeconomic impact findings for the OMGP project in Section 5.10 of the AFC, as amended.

3.11 TRAFFIC AND TRANSPORTATION

The proposed project changes do not affect the assessment of traffic and transportation presented in Section 5.11 of the AFC. The applicant will implement intersection upgrades to mitigate construction traffic from the overall OMEC as required in the CEC License Decision for the project. No operation phase traffic related effects for modified Route 2C are expected.

3.12 NOISE

3.12.1 Affected Environment

Proposed modified gas pipeline Route 2C is located on undeveloped land over its length. No sensitive noise receptors are located near the pipeline route.

The proposed project changes associated with modified gas pipeline Route 2C have no effect on the noise analysis presented in CEC License Amendment 2 (July, 2002) for the previously CEC approved Route 2C.

The residential area closest to the site is located approximately 2.5 miles away; three homes are located in this area. The existing landscape provides intervening topography between the project site and the homes. The ambient noise level at this area was recorded during a site visit on June 10, 2002. The measured sound level was 65.9 dBA L_{eq}, 71.0 L_{10}, 56.3 dBA L_{50}, and 45.8 dBA L_{90}. The sources of noise at the residential area included roadway traffic on Otay Mesa Road, airplane overflights, industrial parks in the area, and natural noises. The noise level was recorded with a Larson Davis System 824 Integrating Sound Level Meter

(serial # 824A0427), which was calibrated with a Larson Davis CAL200 Calibrator (serial # 1238) before and after the measurement.

3.12.2 Environmental Consequences

Construction of proposed modified pipeline Route 2C is expected to result in short-term, transient noise impacts during the 3 to 5 month construction phase. Blasting activities would only occur during daytime hours and would utilize protective matting which would muffle associated noise. There are no sensitive receptors located nearby and, as discussed in Section 5.12 of the AFC, no significant construction related noise effects are anticipated.

The proposed modifications to gas pipeline Route 2C would have no effect on the analysis of operational phase noise impacts as presented in CEC License Amendment 2 (July 2002).

3.12.3 Mitigation Measures

As discussed in CEC License Amendment 2 (July 2002), to mitigate the OMEC meter station control valve run noise to County specifications, it will be necessary to install Whisperflow silencers and to use thick walled pipe with jacketing for above ground facilities that generate noise.

With mitigation, no significant noise effects would occur.

3.12.4 LORS

3.12.4.1 County of San Diego

The noise level limits applicable to operation of the previously approved OMEC LLC gas metering facility are found in Section 36.404 of the San Diego County Code. The subject property is zoned S-88; all surrounding American properties are zoned S-88 or S-90, and the southern property boundary coincides with the Mexican border. The hourly noise level limits for the S-88 zone are 45 dBA from 10 p.m. to 7 a.m. and 50 dBA from 7 a.m. to 10 p.m. However, in a 1999 letter (County of San Diego, 1999) from the County to the CEC and a subsequent meeting with the County on June 12, 2002, the County acknowledged that the S-88 zone noise level near the proposed Otay Mesa Energy Center is designed primarily for residential rather than commercial or industrial land uses and that land uses as specified by the Specific Plan for East Otay Mesa correspond to the uses addressed by M50, M52, M54,

and M58 zone categories. The zone category for the plant site is designated M58 – Heavy Industrial, which has an applicable sound level limit of 80 dBA at any time. Since the Specific Plan designated most of the properties in the project area for industrial land uses, it can be assumed that applicable sound level limit is actually 70-80 dBA L_{eq} (h) for the locations of the previously approved OMEC LLC metering station. Discussions with County Planning staff (Bennett, 2002) have affirmed the appropriateness of the 70 dBA L_{eq} (h) noise standard for the meter station site.

3.12.4.2 CEC

An increase in noise of 5 dBA L_{90} resulting from project operation at noise-sensitive receptors is considered significant. The proposed project changes, including operation of the gas metering facility, would not exceed this CEC noise threshold at the closest sensitive receptor (approximately 2.5 miles away).

3.12.5 References

Bennett, J. 2002. County of San Diego. Personal communication with J. Fuller (URS Corporation).

County of San Diego. 1999. Letter from Department of Planning and Land Use to Eileen Allen. September 28, 1999. Noise section (page 3).

3.13 VISUAL RESOURCES

The proposed project modifications do not alter the visual resources assessment presented in CEC License Amendment 2 (July 2002).

The proposed pipeline alignment will not alter the visual appearance of the project from public viewing locations. A 60- to 75-foot-wide right of way will be cleared and graded along the pipeline route depending on the location. Disturbed areas will generally be restored upon completion of construction. It is assumed that restoration will include returning the surface topography in disturbed areas to an approximation of its original contours followed by revegetation. The proposed modifications are not substantial enough to change the insignificant visual impact findings presented in Section 5.13 of the AFC.

3.14 WASTE MANAGEMENT

The proposed modifications to the project that are addressed in this License Petition do not change the impact findings for waste management as presented in Section 5.14 of the AFC. No significant adverse impacts related to waste management are anticipated.

3.15 HAZARDOUS MATERIALS HANDLING

The proposed project modifications are not substantial enough to affect the results of the hazardous materials handling assessment presented in Section 5.15 of the AFC. No significant adverse impacts related to hazardous materials use or disposal are expected associated with the proposed project changes assessed in this License Petition. Blasting activities will be performed by properly trained personnel and blasting mats will be used to prohibit debris scatter.

3.16 PUBLIC HEALTH

The proposed project modifications are not expected to impact the public health findings presented in Section 5.16 of the AFC, as amended.

3.17 WORKER SAFETY

The proposed project modifications do not affect the worker safety assessment findings presented in Section 5.17 of the AFC. Blasting activities will be performed by properly trained personnel and blasting mats will be used to prohibit debris scatter and protect worker safety.

3.18 CUMULATIVE IMPACTS

The proposed project modifications do not affect the cumulative impact assessment presented in Section 5.18 of the AFC.

3.19 LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

Compliance with the applicable laws, ordinances, regulations, and standards (LORS) for the proposed project modifications will be accomplished by complying with the LORS identified in the OMGP AFC (Section 7.0) (99-AFC-5) and the CEC's Final Decision for the project.

A summary of the applicable LORS is provided in Table 3.19-1.

TABLE 3.19-1
LORS COMPLIANCE FOR ROUTE 2C

Applicable LORS	Administering Agency	Applicable Route 2C Component/ Activity
FEDERAL		
Endangered Species Act Compliance	U.S. Fish and Wildlife Service	Pipeline Construction
404 Permit	U.S. Army Corps of Engineers	Pipeline crossing of intermittent drainage
STATE		
Endangered Species Act Compliance	California Department of Fish and Game	Pipeline construction
401 Certification	Regional Water Quality Control Board-Region	Water quality certification associated with ACOE 404 Permit (above)
Stormwater Pollution Control and Pollution Prevention Plan (Construction/Operation)	Regional Water Quality Control Board-Region	Pipeline/meter station construction/operation
Streambed Alteration Agreement (1601)	California Department of Fish and Game	Pipeline construction activities in intermittent drainages
LOCAL		
Building Permit	County of San Diego	Metering station
Grading and Drainage Plan	County of San Diego	Pipeline metering station
Blasting Permit	County of San Diego	Pipeline construction

4.0 PROPOSED MODIFICATIONS TO CONDITIONS OF CERTIFICATION

In compliance with the requirements of the CEC Siting Regulations Section 1769 (a)(1)(A), the present section includes those proposed modifications to COCs that would need to be reviewed and approved by the CEC concurrent with the CEC review of this License Petition. As part of this Petition, OMEC LLC is requesting that the CEC review this request to revise Condition of Certification (COC) BIO-10 as shown below. The Applicant is also consulting and coordinating with the U.S. Fish and Wildlife Service and the EPA in association with the January 2005 submittal of the Amended Biological Assessment regarding the appropriate level of biological mitigation given the proposed project changes.

Requested Modification to Condition of Certification BIO-10:

Modify COC BIO-10 (as last approved by the CEC on November 6, 2002) as indicated below (added text is underlined, deleted text is shown in ~~strikethrough~~):

BIO-10 To compensate for temporary and permanent impacts to sensitive species habitat, the project owner shall implement a habitat compensation strategy that guarantees the perpetual care of at least ~~43.7~~ 42.47 acres of off-site habitat in the region of the proposed project.

5.0 POTENTIAL EFFECTS ON THE PUBLIC

Consistent with the California Energy Commission Siting Regulations Section 1769(a)(1)(G), this section includes a discussion of how the proposed project modifications affect the public. The following discussion describes the potential effects of the project changes, in the same order of discussion of the Amendment.

5.1 PROPOSED PROJECT CHANGES

5.1.1 Minor Modification of Proposed Natural Gas Supply Line Route 2C

Proposed modified natural gas supply line Route 2C is located on private, undeveloped land on the easternmost portion of Otay Mesa. Route 2C traverses land near the western base of the San Ysidro Mountains that is uninhabited and non-developed with the exception of SDG&E electric transmission (Miguel-Tijuana 230 kV transmission line) and SDG&E gas distribution (SDG&E Otay Metering Station and buried pipelines) near the southern termini of Route 2C. There are no residences near the proposed alignment of Route 2C on the U.S. side of the border. The minor shift of the initial portion of the pipeline route by 95 feet to the east would not result in potential adverse effects on the public. In addition, the deletion of the previously proposed directional drilling/boring construction techniques would not result in potential adverse impacts on the public. Due to the distance from residential (or other potentially sensitive receptors), no potential adverse effects on the public are expected.

6.0 POTENTIAL EFFECTS ON PROPERTY OWNERS

Consistent with the California Energy Commission Siting Regulations Section 1769(a)(1)(I), the following section addresses potential effects on nearby property owners, the public, and parties in the application proceedings.

6.1 PROPOSED PROJECT CHANGES

6.1.1 Minor Modification of Proposed Natural Gas Supply Line Route 2C

Proposed modified natural gas pipeline Route 2C is located on undeveloped private land with the exception of existing utility facilities (SDG&E) near the U.S./Mexico border. The Applicant (Calpine/OMEC LLC) has already negotiated pipeline easement deals with applicable property owners. No formal development plans (i.e., no active permit applications pending with San Diego County) have been identified in the vicinity of the pipeline route. No long-term effects on adjacent property owners related to construction or operation of proposed modified pipeline Route 2C are expected.

7.0
LIST OF PROPERTY OWNERS

Consistent with the California Energy Commission Siting Regulations Section 1769 (a)(1)(H), this section lists the property owners adjacent to the proposed modifications. The Assessor Parcel Numbers (APN) and property owner information for parcels that are either traversed and/or within 500 feet of the centerline of modified Route 2C are listed in Table 7-1.

7.0
LIST OF PROPERTY OWNERS

TABLE 7-1
ASSESSOR PARCEL AND PROPERTY OWNER INFORMATION FOR PARCELS TRAVERSED AND/OR WITHIN 500 FEET OF MODIFIED ROUTE 2C (NORTH TO SOUTH)

Assessor Parcel Number	Owner	Address
648-040-22	D & D Land Holdings	4160 Dublin Blvd Dublin, CA 94568-3139
648-050-15	D & D Land Holdings	5440 Morehouse Drive, Suite 4000 San Diego, CA 92121-6719
648-050-16	D & D Land Holdings	5440 Morehouse Drive, Suite 4000 San Diego, CA 92121-6719
648-040-21	OMC Properties, LLC	5440 Morehouse Drive, Suite 4000 San Diego, CA 92121-6719
648-070-03	Judd & Dillard 310 LLC	462 Stevens Avenue, Suite 301 Solana Beach, CA 92075
648-080-13	D & D Land Holdings	5440 Morehouse Drive, Suite 4000 San Diego, CA 92121-6719
648-080-14	D & D Land Holdings	5440 Morehouse Drive, Suite 4000 San Diego, CA 92121-6719
648-080-25	D & D Land Holdings	5440 Morehouse Drive, Suite 4000 San Diego, CA 92121-6719
648-080-27	Judd & Dillard 310 LLC	462 Stevens Avenue, Suite 301 Solana Beach, CA 92075
648-080-16	Rancho Vista Del Mar	5440 Morehouse Drive, Suite 4000 San Diego, CA 92121-6719
648-080-18	Rancho Vista Del Mar	5440 Morehouse Drive, Suite 4000 San Diego, CA 92121-6719
648-080-19	Otay Mesa Property LP	5440 Morehouse Drive, Suite 4000 San Diego, CA 92121-6719
648-080-23	United States of America - Otay Mesa Border Crossing	9495 Customhouse Plaza San Diego, CA 92154
648-080-24	San Diego Gas and Electric Company	8335 Century Park Court, CP11D. Bldg 1 San Diego, CA 92123-1569